

03-02-05

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RCE

Express Mail Mailing Label No. EV 668159729 US

**REQUEST FOR CONTINUED EXAMINATION (RCE) TRANSMITTAL**

ADDRESS TO: Mail Stop RCE

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Application No.	09/977,971
Filing Date	October 17, 2001
First Named Inventor	Forde
Group Art Unit	3731
Examiner Name	V. Bui
Attorney Docket No.	NMT-002

This is a Request for Continued Examination (RCE) under 37 C.F.R. § 1.114 of the above-identified application.

**NOTES**

**RCE v. CPA:** 37 C.F.R. § 1.114 is effective on May 29, 2000. If the above-identified application was filed prior to May 29, 2000, applicant may wish to consider filing a continued prosecution application (CPA) under 37 C.F.R. § 1.53(d) instead of a RCE to be eligible for the patent term adjustment provisions of the AIPA.

**FEE AND SUBMISSION REQUIRED:** A submission as used in this section includes, but is not limited to, an information disclosure statement, an amendment to the written description, claims, or drawings, new arguments, or new evidence in support of patentability. If reply to an Office action under 35 U.S.C. 132 is outstanding, the submission must meet the reply requirements of § 1.111 (see 37 C.F.R. 1.114 (c)).

**RCE APPLIES TO:** An application in which prosecution is closed (see 37 C.F.R. § 1.114 (b)).

**RCE DOES NOT APPLY TO:** (1) A provisional application; (2) an application for a utility or plant patent filed under 35 U.S.C. 111(a) before June 8, 1995; (3) an international application filed under 35 U.S.C. 363 before June 8, 1995; (4) an application for a design patent; or (5) a patent under reexamination (see 37 C.F.R. 1.114(e)).

**1. SUBMISSION REQUIRED UNDER 37 C.F.R. § 1.114**

- a. ☒ Enter and consider the unentered amendment under 37 C.F.R. § 1.116 and remarks previously filed in U.S.S.N. 09/977,971 on January 31, 2005, a copy of which is enclosed herewith (10 pgs.).
- b. ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on \_\_\_\_.
- c. ☐ Amendment/Response enclosed.
- d. ☐ Affidavit(s)/Declaration(s) enclosed.
- e. ☐ Information Disclosure Statement (IDS) enclosed.
- i. ☐ PTO-1449
- ii. ☐ Copies of IDS Citations
- f. ☐ Other \_\_\_\_\_

**2. RCE FEE REQUIRED UNDER 37 C.F.R. § 1.114**

- a. ☒ Small entity status
- i. ☒ was established in the prior nonprovisional application.
- ii. ☐ is established herewith by the enclosed written assertion of entitlement to small entity status.
- b. ☐ A Petition and Fee for Extension of Time for \_\_\_\_ months up to and including \_\_\_\_ is enclosed herewith.
- c. ☒ A check in the amount of \$ 395.00 is enclosed.
- d. ☐ The Commissioner is hereby authorized to charge the required fee(s), i.e., \$ \_\_\_\_\_, to Deposit Account No. 50-1721.
- e. ☒ The Commissioner is hereby authorized to credit overpayments or charge any additional fees required for this submission under 37 C.F.R. §§ 1.16 and 1.17 to Deposit Account No. 50-1721.

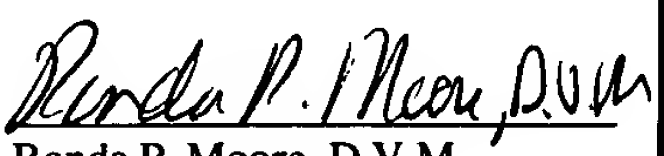
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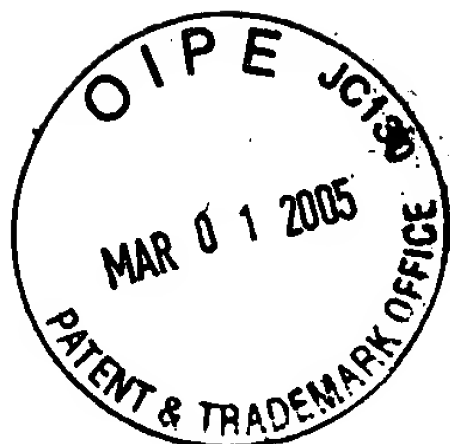
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### 3. MISCELLANEOUS

- a. ☒ Return Receipt Postcard enclosed.  
b. ☐ Other.

CORRESPONDENCE ADDRESS	SIGNATURE BLOCK
<p>Direct all correspondence to: Patent Administrator Kirkpatrick &amp; Lockhart Nicholson Graham LLP 75 State Street Boston, MA 02109-1808 Tel. No.: (617) 261-3100 Fax No.: (617) 261-3175</p>	<p>Respectfully submitted,</p> <p> Ronda P. Moore, D.V.M. Attorney for Applicant(s) Kirkpatrick &amp; Lockhart Nicholson Graham LLP 75 State Street Boston, MA 02109-1808</p> <p>Date: March 1, 2005 Reg. No. 44,244 Tel. No.: (617) 261-3167 Fax No.: (617) 261-3175</p>



PATENT  
Attorney Docket No. NMT-002  
Express Mail Mailing Label No. EV 668159729 US

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

APPLICANT(S): Forde et al.  
SERIAL NO.: 09/977,971 GROUP NO.: 3731  
FILING DATE: October 17, 2001 EXAMINER: V. Bui  
TITLE: Over-the-Wire Interlock Attachment/Detachment Mechanism

Mail Stop RCE  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Request for Continued Examination (RCE)**

An Examiner's Advisory Action was mailed from the U.S. Patent Office on February 10, 2005 for the above-referenced patent application. In the Advisory Action, the Examiner declined to enter the amendments or consider the remarks presented in Applicants' Response to Final Office Action, filed January 31, 2005. Applicants submit this Request for Continued Examination and request the amendments to the claims in the Response filed January 31, 2005 be entered into the record of the application and that the remarks presented therein be considered.

Applicants do not believe an extension of time is required. However, should Applicants be in error, please consider this paper a conditional petition for an extension of time.

Enclosed herewith, please find:


1. Request for Continued Examination Transmittal (2 pgs.);
2. a copy of Applicants' Response to Final Office Action (10 pgs.), previously filed on January 31, 2005 for the above-referenced patent application;
3. a check in the amount of \$395.00; and
4. a return receipt postcard;

all bearing the Express Mail Mailing Label No. EV 668159729 US.

Respectfully submitted,

Date: March 1, 2005  
Reg. No. 44,244

Tel. No.: (617) 261-3167  
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**PATENT**

Atty. Docket No. NMT-002

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

APPLICANT: Forde *et al.* CONFIRMATION NO.: 4305  
SERIAL NUMBER: 09/977,971 ART UNIT: 3731  
FILING DATE: October 17, 2001 EXAMINER: V. Bui  
TITLE: Over-the-Wire Interlock Attachment/Detachment Mechanism

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**RESPONSE TO FINAL OFFICE ACTION**

Sir:

This paper is submitted in response to the Final Office Action (the "Office Action") for the above-identified patent application, mailed from the United States Patent and Trademark Office on December 1, 2004. Applicants believe that no extension of time is required for the submission of this paper. Should Applicants be in error, and additional time for responding to this Office Action is required, please consider this paper as a conditional petition for an extension of time and conditional authorization to charge fees for this submission to Deposit Account No. 20-0531.

**Amendments to the Claims** are reflected in the listing of claims which begins on page 2 of this paper.

**Remarks** begin on page 9 of this paper.

### **Amendments to the Claims**

This listing of claims will replace all prior versions and listings of claims in the application:

### **Listing of Claims:**

1. (Currently amended)      An over-the-wire interlock attachment/detachment mechanism for a medical implant comprising:
  - a male locking body member having a forward end,
  - a flexible locking support having a locking member formed thereon which extends from the forward end of said male locking body member, said flexible locking support, when unrestrained, extending laterally and angularly outward from said male locking body member, and
  - a female lock receiving body member for receiving said locking member, said female lock receiving body member having a first body end and being formed with an indented portion adjacent to said first body end to receive and engage said locking member;wherein one of said male locking body member and said female lock receiving body member comprises an alignment extension while the other comprises an extension receiving cutout and spacer sections which terminate in inclined outer end surfaces, the alignment extension and the cutout being adapted for axially aligning the male locking body member and the female lock receiving body member for engagement.
2. (Currently amended)      The over-the-wire interlock attachment/detachment mechanism of claim 1, wherein said female lock receiving body member is secured to [said]a medical implant.
3. (Previously presented)      The over-the-wire interlock attachment/detachment mechanism of claim 1 wherein a lock operating sheath is mounted to slide on said male

locking body member, said lock operating sheath operating to reversibly engage said male locking body member with said female lock receiving body member.

4. (Original) The over-the-wire interlock attachment/detachment mechanism of claim 1 wherein said male locking body member and female lock receiving body member are cylindrical members of substantially equal diameter.

5. (Original) The over-the-wire interlock attachment/detachment mechanism of claim 4 wherein a lock operating sheath is mounted to slide on said male locking body member, said lock operating sheath operating to engage said flexible locking support to move said locking support inwardly toward said male locking body member.

6. (Original) The over-the-wire interlock attachment/detachment mechanism of claim 5, wherein said female lock receiving body member is secured to said medical implant.

7. (Original) The over-the-wire interlock attachment/detachment mechanism of claim 1 wherein a plurality of spaced flexible locking supports extend from the forward end of said male locking body member, each of said spaced flexible locking supports being formed by an elongate, flexible locking arm having a first arm end connected to said male locking body member, said elongate flexible locking arm extending angularly outward from said first arm end when said elongate flexible locking arm is unrestrained.

8. (Original) The over-the-wire interlock attachment/detachment mechanism of claim 7 wherein a locking member is formed on each elongate, flexible locking arm and is spaced from the first arm end thereof and outwardly from the forward end of said male locking body member,

said female lock receiving body member being formed with indented portions adjacent to said first body end to receive and engage said locking members.

9. (Original) The over-the-wire interlock attachment/detachment mechanism of claim 8 wherein each elongate, flexible locking arm has a free end spaced from the first arm end thereof, said locking member being formed by a shaped, enlarged section at the free end of said elongate flexible locking arm.

10. (Original) The over-the-wire interlock attachment/detachment mechanism of claim 9 wherein said male locking body member and female lock receiving body member are cylindrical members of substantially equal diameter.

11. (Original) The over-the-wire interlock attachment/detachment mechanism of claim 10 wherein a lock operating sheath is mounted to slide on said male locking body member, said lock operating sheath operating to engage said elongate flexible locking arms to move said elongate flexible locking arms and locking members inwardly toward said male locking body member.

12. (Original) The over-the-wire interlock attachment/detachment mechanism of claim 11 wherein said female lock receiving body is cut away to provide spaced openings forming said indented portions, each said spaced opening being formed to receive a flexible locking arm and the locking member formed thereon.

13. (Original) The over-the-wire interlock attachment/detachment mechanism of claim 12 wherein each such spaced opening includes an elongate, open ended entry section shaped to receive an elongate flexible locking arm and an enlarged locking cutout connected to said elongate open ended entry section, said enlarged locking cutout being shaped to receive and conform in shape to said locking member.

14. (Previously presented) The over-the-wire interlock attachment/detachment mechanism of claim 1 wherein said flexible locking support includes at least one elongate flexible locking arm having a first end connected to said male locking body member, said elongate flexible locking arm extending angularly outward from said first arm end when



said elongate flexible locking arm is unrestrained, said locking member being formed on said elongate flexible locking arm, and

wherein said alignment extension comprises an elongate guide finger extending from the forward end of said male locking body member,

said female lock receiving body being cut away to provide a plurality of spaced openings each formed to receive an elongate flexible locking arm and locking member or a guide finger.

15. (Original) The over-the-wire interlock attachment/detachment mechanism of claim 14, wherein said female lock receiving body member is secured to said medical implant.

16. (Original) The over-the-wire interlock attachment/detachment mechanism of claim 14 wherein a lock operating sheath is mounted to slide on said male locking body member, said lock operating sheath operating to engage said at least one elongate flexible locking arm to move said elongate flexible locking arm and locking member inwardly toward said male locking body member.

17. (Original) The over-the-wire interlock attachment/detachment mechanism of claim 16 wherein each such spaced opening includes an elongate, open ended entry section shaped to receive an elongate flexible locking arm or guide finger and an enlarged locking cutout connected to said elongate open ended entry section, said enlarged locking cutout being shaped to receive and conform in shape to said locking member.

18. (Original) The over-the-wire interlock attachment/detachment mechanism of claim 17 which includes a plurality of spaced elongate flexible locking arms and a plurality of spaced elongate guide fingers, said female lock receiving body including a plurality of spaced openings at least equal in number to the number of elongate flexible locking arms and elongate guide fingers.

19. (Original) The over-the-wire interlock attachment/detachment mechanism of claim 18 wherein said male locking body member and female lock receiving body member are cylindrical members of substantially equal diameter.

20. (Original) The over-the-wire interlock attachment/detachment mechanism of claim 2 wherein said medical implant is a free standing over-the-wire filter.

21. (Previously presented) The over-the-wire interlock attachment/detachment mechanism of claim 1 wherein said alignment extension extends laterally from the forward end of said male locking body member.

22. (Withdrawn) A medical implant delivery system comprising:  
a locking mechanism sized and shaped for insertion in a mammalian blood vessel, the locking mechanism comprising a locking member; and  
a sheath slideably disposed over the locking mechanism and allowing the locking member to repeatedly transition reversibly between a first state and a second state, wherein the sheath immobilizes the locking member in the first state when slid over the locking member and releases the locking member into the second state when slid away from the locking member.

23. (Withdrawn) The delivery system of claim 22 wherein the locking member extends, in the first state, substantially parallel to a longitudinal axis of the locking mechanism.

24. (Withdrawn) The delivery system of claim 22 wherein the locking member extends, in the second state, angularly outward from a longitudinal axis of the locking mechanism.

25. (Withdrawn) The delivery system of claim 22 wherein the locking member comprises an enlargement at its free end.

26. (Withdrawn) The delivery system of claim 25 wherein the enlargement is substantially circular.
27. (Withdrawn) The delivery system of claim 22 wherein the locking mechanism comprises multiple locking members spaced substantially equidistant to a longitudinal axis of the locking mechanism.
28. (Withdrawn) The delivery system of claim 22 further comprising an implant attached to the locking mechanism through a cutout section in the implant that receives the locking member.
29. (Withdrawn) The delivery system of claim 28 wherein the implant is selected from the group consisting of an occluder, a filter, and a stent.
30. (Withdrawn) The delivery system of claim 28 wherein the implant and the locking mechanism are axially aligned when the locking member is received in the cutout section.
31. (Withdrawn) The delivery system of claim 22 further comprising a guidewire.
32. (Withdrawn) The delivery system of claim 22 further comprising a flexible section.
33. (Withdrawn) A method for retrieving a medical implant comprising:  
accessing a medical implant using a locking mechanism comprising a locking member, wherein the locking mechanism is enclosed in a sheath, and the implant comprises a cutout section;  
sliding the sheath away from the locking mechanism to allow the locking member to angle outwardly from a longitudinal axis of the locking mechanism;

positioning the locking member over the cutout section of the implant;  
sliding the sheath back over the locking mechanism to lock the locking member in the cutout section and thereby locking the implant; and  
retrieving the locking mechanism with the implant.

34. (Withdrawn) The method of claim 33 where the accessing step comprises accessing the implant with a guidewire and passing the locking mechanism over the guidewire.

35. (Withdrawn) The method of claim 33 wherein the implant is selected from the group consisting of an occluder, a filter, and a stent.

## **REMARKS**

### **Status of Claims**

Claims 1-35 are pending in this application, of which, claims 22-35 have been withdrawn. Claims 1-21 presently stand rejected. Claims 1 and 2 are amended by this paper. Support for amended claims 1 and 2 may be found throughout the application and at least, in particular, at paragraphs 25 through 27.

In the Office action mailed on December 1, 2004, claim 2 was rejected under 35 U.S.C. § 112, for lack of positive antecedent basis. Claims 1, 3-5, 7-14, 16-19 and 21 were rejected under 35 U.S.C. § 102(e) as being anticipated by Letendre et al. (U.S. Patent No. 6,214,036 hereinafter "Letendre"). Additionally, claims 2, 6, 15 and 20 were rejected under 35 U.S.C. § 103(a) as being obvious in view of Letendre.

Applicants respectfully request reconsideration in light of the amendments presented herein and the arguments below. The outstanding rejections are addressed in the order in which they appear in the Office Action.

### **Rejection of Claims under 35 U.S.C. § 112**

According to the Office Action, claim 2 presently stands rejected for failing to recite a positive antecedent basis. Applicants have amended the claim to attend to the rejection and, therefore, respectfully request that this rejection be reconsidered and withdrawn.

### **Rejection of Claims under 35 U.S.C. § 102(e)**

According to the Office Action, claims 1, 3-5, 7-14, 16-19 and 21 presently stand rejected under 35 U.S.C. § 102(e) as being anticipated by Letendre.

Amended claim 1 is directed to an over-the-wire interlock attachment/detachment mechanism for a medical implant including a male locking body member, a flexible locking support, and a female lock receiving member, wherein one of the male locking body members and female lock receiving members comprises an alignment extension, while the other comprises an extension receiving cut-out and spacer sections which terminate in inclined outer end surfaces.

Applicants submit that in contrast to Applicants' claimed invention, Letendre does not teach or suggest the use of spacer sections with inclined outer end surfaces on Letendre's delivery apparatus 40 (see copy of FIG. 2 enclosed with the Office Action). In contrast to Applicants' claimed mechanism, an operator using Letendre's delivery apparatus must have precise alignment of Letendre's stent and delivery apparatus in order to recapture the stent. Accordingly, Applicants submit that Letendre fails to teach or suggest each and every element of the claimed invention.

In view of the foregoing, Applicants submit that claims 1, 3-5, 7-14, 16-19 and 21, as amended, are not anticipated by Letendre and, therefore, respectfully request that these rejections be reconsidered and withdrawn.

Rejection of Claims under 35 U.S.C. § 103(a)

According to the Office Action, claims 2, 6, 15 and 20 presently stand rejected under 35 U.S.C. § 103(a) as being obvious in view of Letendre. Claims 2, 6, 15, and 20 depend from claim 1 and are patentable for all of the reasons provided above for patentability of amended claim 1. Applicants respectfully request that these rejections be reconsidered and withdrawn.

Summary

Applicants respectfully request that the Examiner reconsider the application and claims 1-21 in light of the foregoing amendment and remarks, and respectfully submit that the claims, as amended, are in condition for allowance. The Examiner is invited to contact the undersigned with any questions about this paper. Early and favorable action is respectfully solicited.

Date: January 31, 2005  
Reg. No. Limited Recognition  
Tel. No.: (617) 248-7808  
Fax No.: (617) 248-7100

3160089

Respectfully submitted,



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Attorney for Applicant  
Testa, Hurwitz & Thibeault, LLP  
(a limited liability partnership in  
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125 High Street  
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